

Applicants: Talyansky, Roman et al.
Serial Number: 10/673,261

Assignee: Intel Corporation
Attorney Docket: P-6115-US

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REMARKS

Applicants have carefully studied the Office Action. This paper is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

Status of the Claims

Claims 1-25 are pending in the Application. Claims 1-23 have been amended. No new matter has been added.

Remarks to the Specification

The Examiner commented on the Abstract, but made no objection to the abstract. Applicants assert that the abstract as filed is proper.

Claim Objections

The Examiner objected to claims 2-7, 9-10, 12-13, 15-16, 18-19, and 21-22 for the use of "A" or "An". Applicants respectfully submit that in view of the present amendments to claims 2-7, 9-10, 12-13, 15-16, 18-19, and 21-22, the objections to claims 2-7, 9-10, 12-13, 15-16, 18-19, and 21-22 should be withdrawn.

Claim Rejection under 35 USC §112

The Examiner rejected claims 8-10, 15, 17-19, 21, and 23-25 under 35 USC § 112 for failing to comply with the enablement requirement. Applicants do not discuss the substance of the rejection under 35 USC § 112 for failing to comply with the enablement requirement. However, applicants respectfully submit that in view of the amendments to claims 8, 15, 17, 19, 21, and 23, the 35 USC § 112 rejections of claims 8-10, 15, 17-19, 21, and 23-25 should be withdrawn.

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The Examiner rejected claims 5, 8-10, 15, 17, 19, 21, and 23-25 under 35 USC § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Amended claim 1 includes, *inter alia*, an instrumentation fragment having “access to only one free register”. Claim 5 as amended recites “freeing a predicate register” as disclosed for example on page 10 of the specification. Claims 8-10, 15, 17, 19, 21, and 23-25, as variously amended, include, variously, “only one register” and/or are not indefinite. Therefore, Applicants respectfully submit that the 35 USC § 112 rejection of claims 5, 8-10, 15, 17, 19, 21, and 23-25 should be withdrawn.

Claim Rejections Under 35 USC §102

The Office Action rejected claim 14 under 35 USC §102(a) as being anticipated by Applicants’ admitted prior art. Applicants respectfully traverse the rejection of claim 14 under 35 USC § 102(a) as being anticipated by Applicants’ admitted prior art.

Claim 14, as amended, includes “allocating a spill cell using only one free register.” The admitted prior art does not include “allocating a spill cell using only one free resister.” Applicants respectfully submit that the 35 USC § 102 rejection of claim 14 as being anticipated by Applicants’ admitted prior art should be withdrawn.

The Office Action rejected claims 14 and 20 under 35 USC §102(e) as being anticipated by O’Connor, United States Patent Number 6,950,923 (“O’Connor”). Applicants respectfully traverse the rejection of claims 14 and 20 under 35 USC § 102(e) as being anticipated by O’Connor.

Each of amended claims 14 and 20 recites a processor with a register stack architecture “capable of allocating a spill cell using only one free register.” (Emphasis added) O’Connor does not disclose the use of only one free register. O’Connor describes where “FIG. 9 shows one embodiment of dribble manager unit 151 in which decisions on transferring data from stack cache memory circuit 610 to stack 400, i.e., spilling data, are based on the number of free registers in stack cache memory circuit 610.” (O’Connor, column 28, lines 51-55) O’Connor further states “Thus, for the specific pointer values

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shown in FIG. 7, the number of free registers FREE is 34..." (O'Connor, column 29, lines 8-10). Therefore, O'Connor does not anticipate claims 14 and 20. Applicants respectfully submit that the 35 USC § 102 rejection of claims 14 and 20 as being anticipated by O'Connor should be withdrawn.

Claim Rejections Under 35 USC §103(a)

The Office Action rejected claim 1 under 35 USC §103(a) as being unpatentable over O'Connor in view of Shende et al., "Integrated Tool Capabilities for Performance Instrumentation and Measurement", ("Shende"). Without conceding the appropriateness of the combination, and without conceding that the combination renders claim 1 obvious, Applicants respectfully submit that the rejection of claim 1 as being unpatentable over O'Connor in view of Shende should be withdrawn.

Amended independent claim 1 recites "an instrumentation fragment that has access to only one free register". As discussed above O'Connor does not disclose, teach, or suggest "access to only one free register." Shende does not cure the deficiencies of O'Connor. Therefore, O'Connor and/or Shende, alone or in combination do not render the amended independent claim 1 obvious.

Applicants respectfully submit that the above-mentioned distinction of amended independent claims 1 would not have been obvious at the time the invention was made to a person having ordinary skill in the art, in view of any of the references on record, alone or in combination. Therefore, Applicants respectfully submit that amended independent claims 1 meets the patentability requirements of 35 USC §103.

The Office Action rejected claims 2-7 under 35 USC 103(a) as being unpatentable over O'Connor and Shende and further in view of Divjak, "Semaphores". Without conceding the appropriateness of the combination, and without conceding that the combination renders claim 1 obvious, Applicants respectfully submit that the rejection of claims 2-7 as being unpatentable over O'Connor and Shende and further in view of Divjak should be withdrawn.

Applicants: Talyansky, Roman et al.
Serial Number: 10/673,261

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As discussed above, claim 1 is allowable over O'Connor and Schende. Divjak does not cure the deficiencies of O'Connor and Shende. Each of claims 2-7 depends from amended independent claim 1, and includes all the features of amended independent claim 1 as well as additional distinguishing features. Therefore, it is respectfully submitted that the patentability of claims 2-7 follows directly from the patentability of amended independent claim 1.

In view of the above, Applicants respectfully request that the rejection of claims 2-7 under 35 USC §103(a) as being unpatentable over O'Connor and Shende, further in view of Divjak be withdrawn.

The Office Action rejected claims 8-13, 15-19, and 21-25 under 35 USC 103(a) as being unpatentable over O'Connor in view of Divjak. Without conceding the appropriateness of the combination, and without conceding that the combination renders claims 8-13, 15-19, and 21-25 obvious, Applicants respectfully submit that the rejection of claims 8-13, 15-19, and 21-25 as being unpatentable over O'Connor in view of Divjak should be withdrawn.

Amended independent claim 8 recites "a method using only one free register of a processor." As discussed above O'Connor does not disclose, teach, or suggest "using only one free register of a processor." Divjak does not cure the deficiencies of O'Connor. Therefore, O'Connor and/or Divjak, alone or in combination do not render the amended independent claim 8 obvious.

Applicants respectfully submit that the above-mentioned distinction of amended independent claim 8 would not have been obvious at the time the invention was made to a person having ordinary skill in the art, in view of any of the references on record, alone or in combination. Therefore, Applicants respectfully submit that amended independent claim 8 meets the patentability requirements of 35 USC §103.

Each of claims 9-13 depends from amended independent claim 8, and includes all the features of amended independent claim 9 as well as additional distinguishing features. Therefore, it is respectfully submitted that the patentability of claims 9-13 follows directly from the patentability of amended independent claim 8.

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Serial Number: 10/673,261

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As stated above, amended independent claim 14, from which claims 15-19 depend, and amended independent claim 20, from which claims 21-25 depend, recites a processor with a register stack architecture "capable of allocating a spill cell using only one free register." O'Connor does not disclose, teach, or suggest "allocating a spill cell using only one free register." Divjak does not cure the deficiencies of O'Connor. Therefore, O'Connor and/or Divjak, alone or in combination do not render the amended independent claims 14 and 20 obvious.

Each of claims 15-19 and 21-25 includes all of the features of one of independent claims 14 and 20 respectively, as well as additional distinguishing features. Therefore, it is respectfully submitted that the patentability of claims 15-19 and 21-25 follows directly from the patentability of amended independent claims 14 and 20 respectively.

In view of the above, Applicants respectfully request that the rejection of claims 8-13, 15-19, and 21-25 under 35 USC §103(a) as being unpatentable over O'Connor in view of Divjak be withdrawn.

Conclusion

In view of the foregoing amendment and remarks, and for at least the reasons discussed above, Applicants respectfully submit that claims 1-25 are deemed to be allowable. Their favorable reconsideration and allowance are respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this paper, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

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Aside from the fees for the petition for the extension of time, no fees are believed to be due in connection with this paper. If any additional fees are due, please charge any such fees to deposit account No. 50-3355.

Respectfully submitted,



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